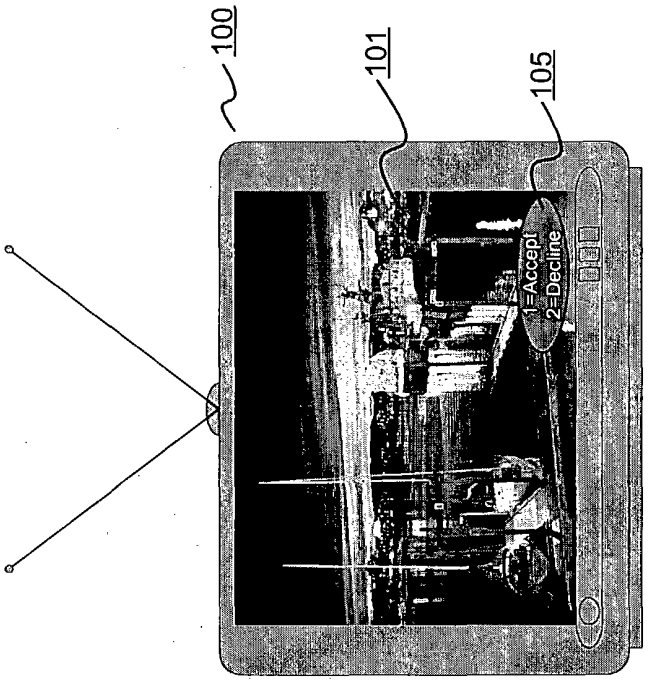

Figure 1C

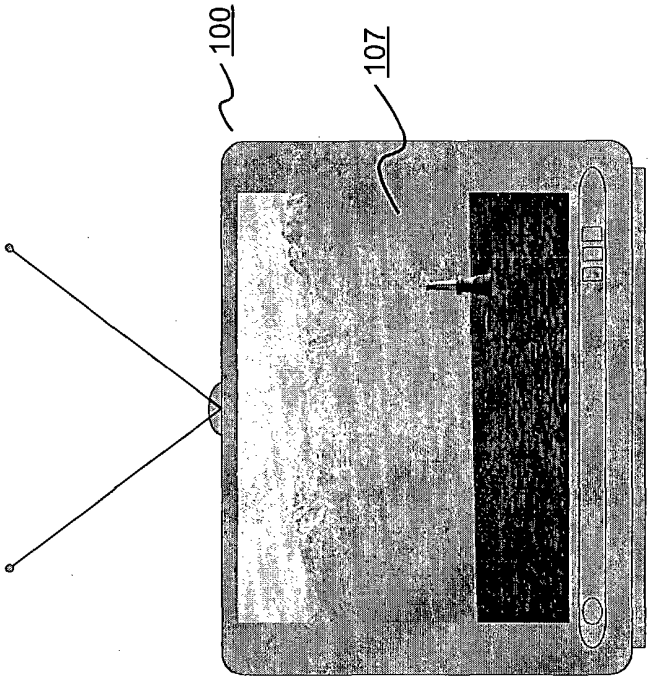

Figure 1D

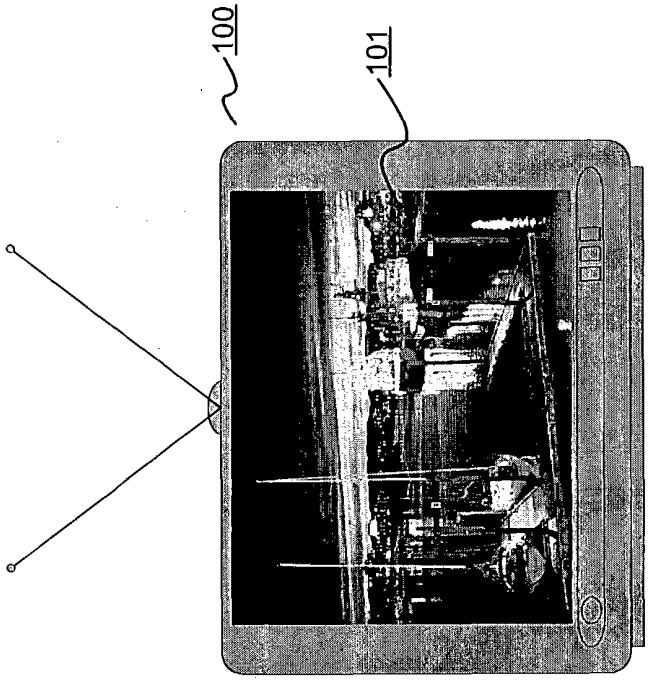

Figure 1A

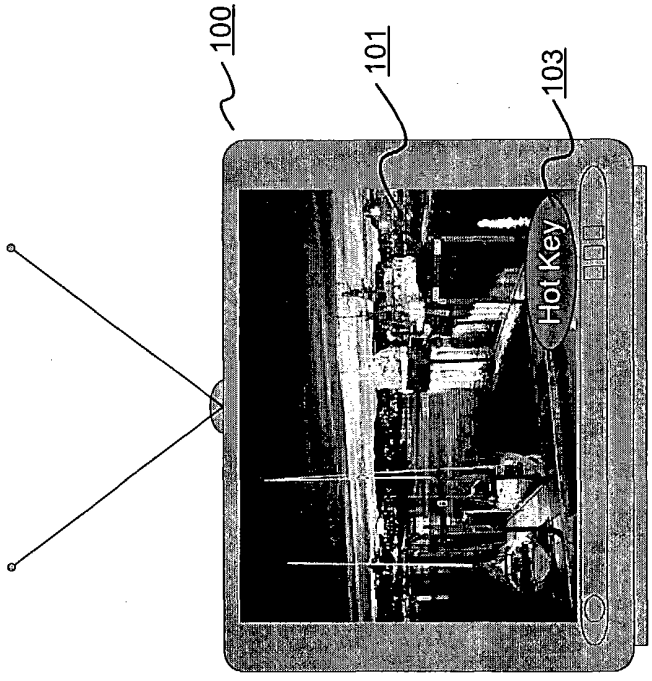

Figure 1B

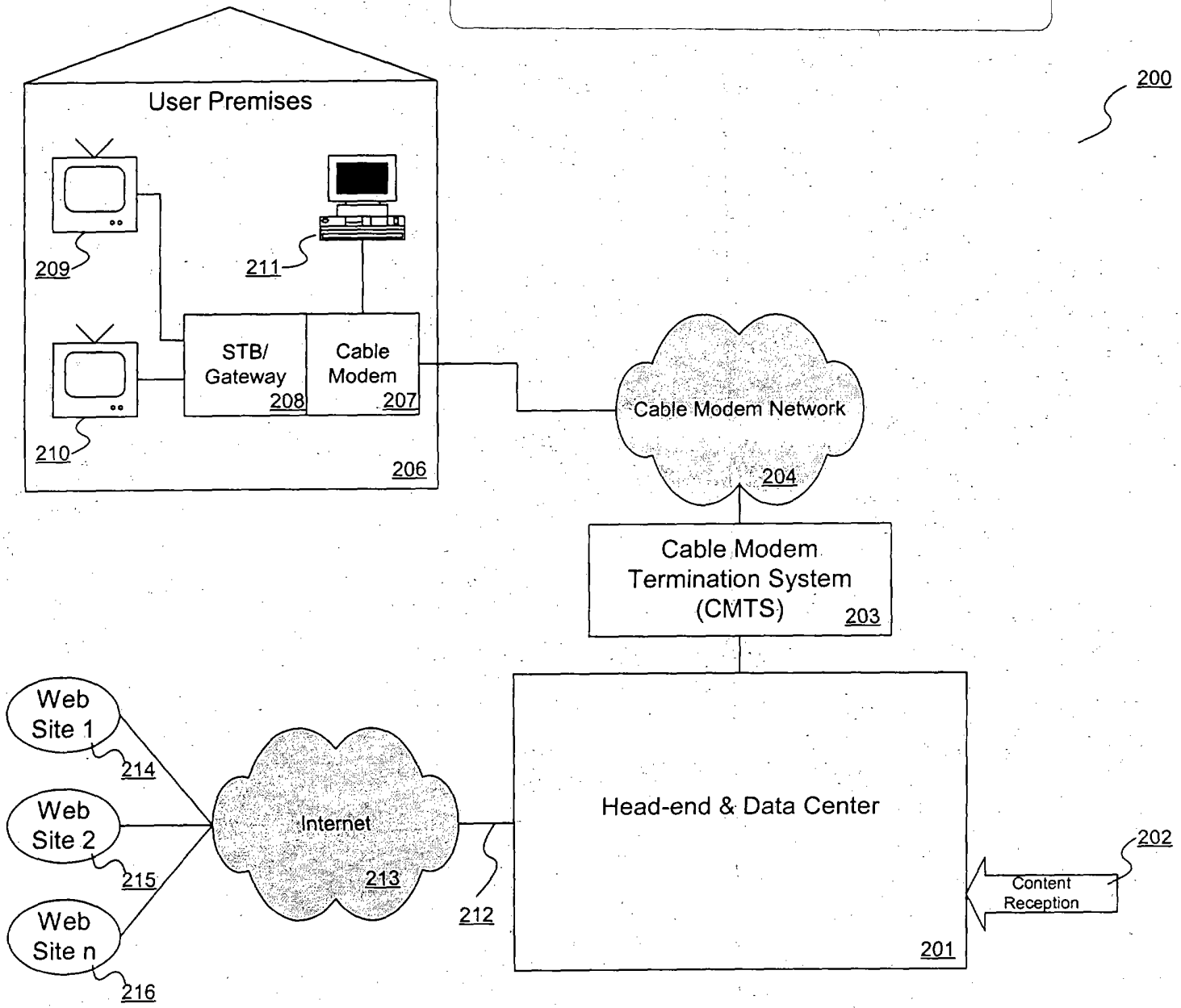
200
User Premises
209
211
STB/
Gateway
208
Cable
Modem
207
210
206
Cable Modem Network
204
Cable Modem
Termination System
(CMTS)
203
Web
Site 1
214
Web
Site 2
215
Web
Site n
216
Internet
213
212
Head-end & Data Center
201
202
Content
Reception

Figure 2

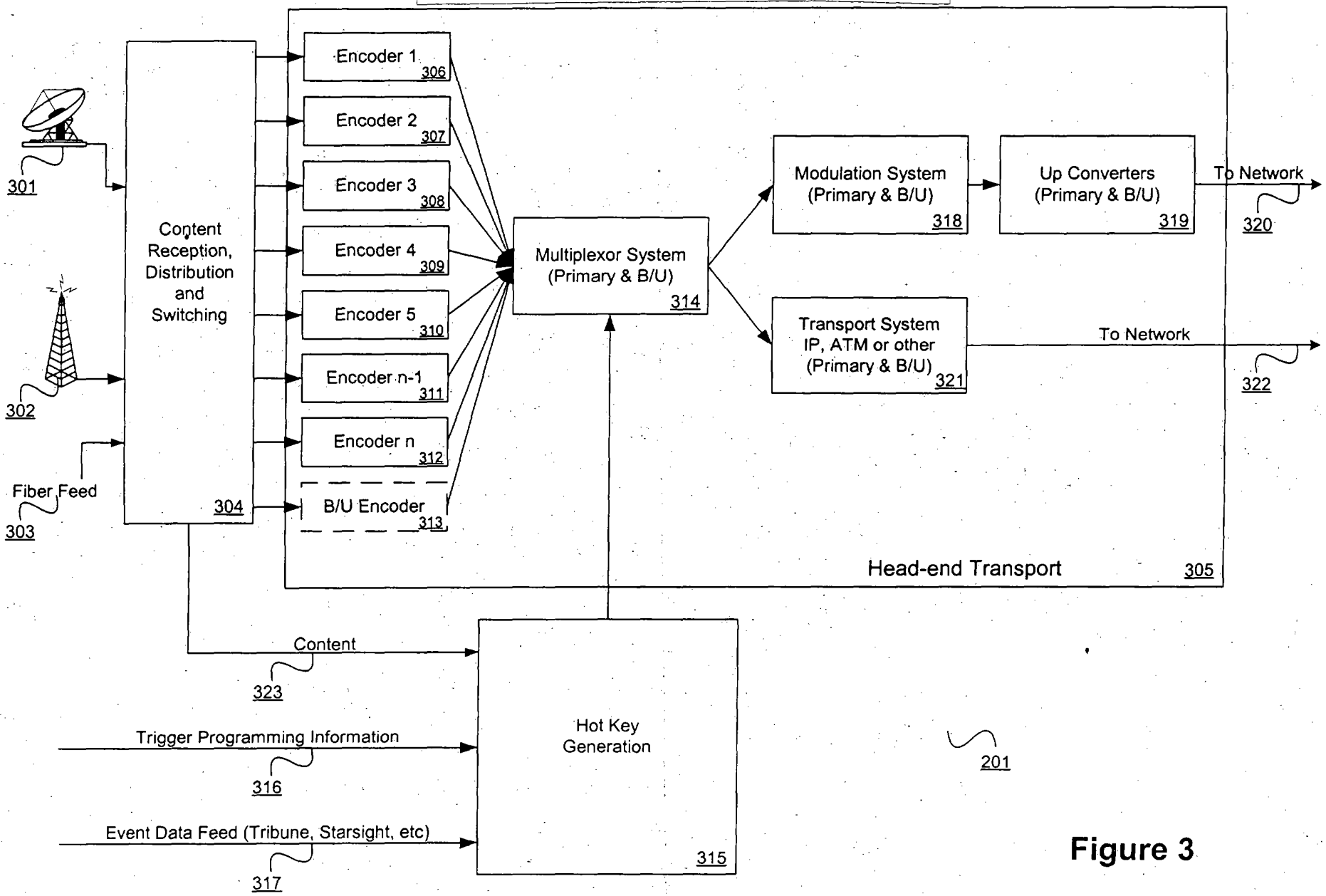
301
302
Fiber Feed
303
Content Reception, Distribution and Switching
304
Encoder 1
306
Encoder 2
307
Encoder 3
308
Encoder 4
309
Encoder 5
310
Encoder n-1
311
Encoder n
312
B/U Encoder
313
Multiplexor System (Primary & B/U)
314
Modulation System (Primary & B/U)
318
Up Converters (Primary & B/U)
319
To Network
320
Transport System IP, ATM or other (Primary & B/U)
321
To Network
322
Head-end Transport
305
Content
323
Trigger Programming Information
316
Event Data Feed (Tribune, Starsight, etc)
317
Hot Key Generation
315
201

Figure 3

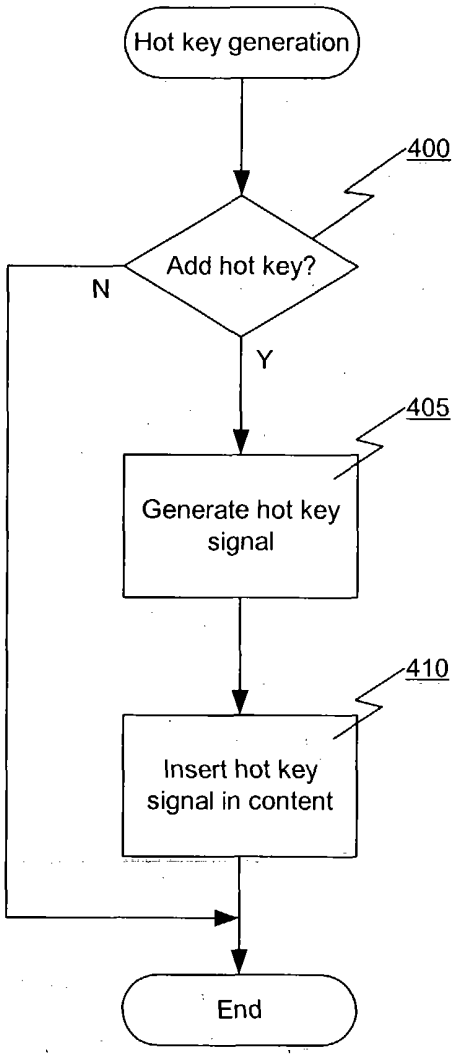
Hot key generation
400
Add hot key?
N
Y
405
Generate hot key signal
410
Insert hot key signal in content
End

Figure 4

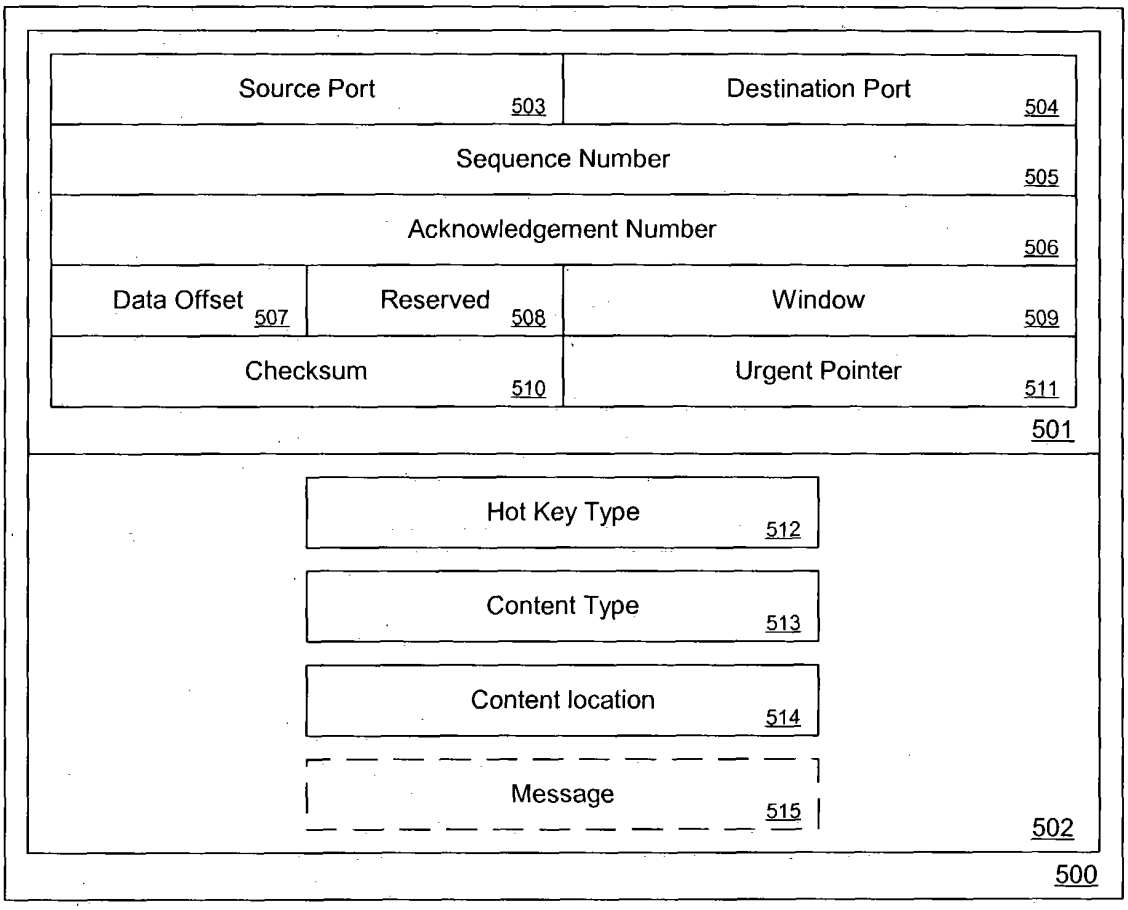
Source Port 503
Destination Port 504
Sequence Number 505
Acknowledgement Number 506
Data Offset 507
Reserved 508
Window 509
Checksum 510
Urgent Pointer 511
501
Hot Key Type 512
Content Type 513
Content location 514
Message 515
502
500

Figure 5

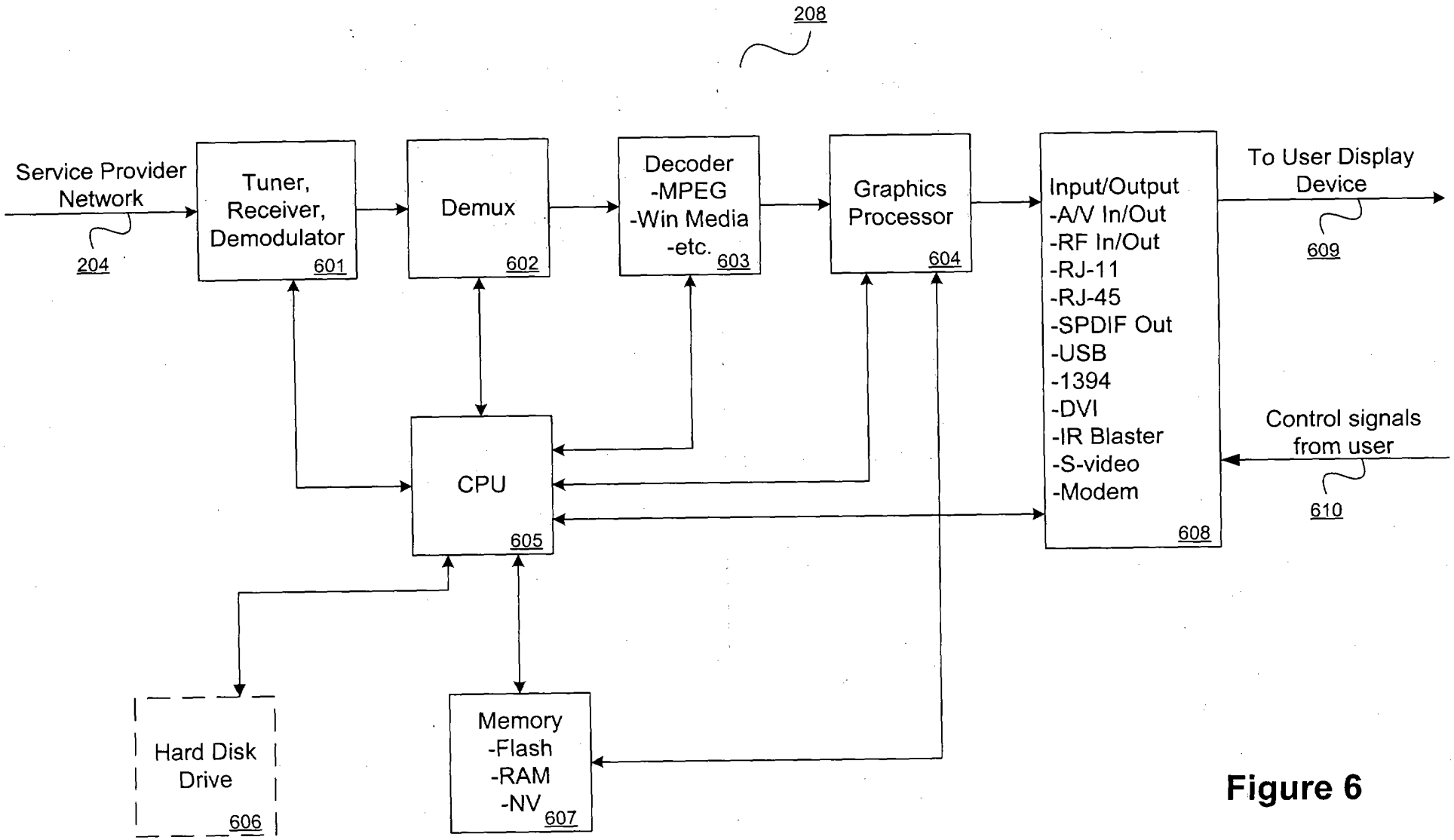
208
Service Provider Network
204
Tuner, Receiver, Demodulator
601
Demux
602
Decoder
-MPEG
-Win Media
-etc.
603
Graphics Processor
604
Input/Output
-A/V In/Out
-RF In/Out
-RJ-11
-RJ-45
-SPDIF Out
-USB
-1394
-DVI
-IR Blaster
-S-video
-Modem
608
To User Display Device
609
Control signals from user
610
CPU
605
Hard Disk Drive
606
Memory
-Flash
-RAM
-NV
607

Figure 6

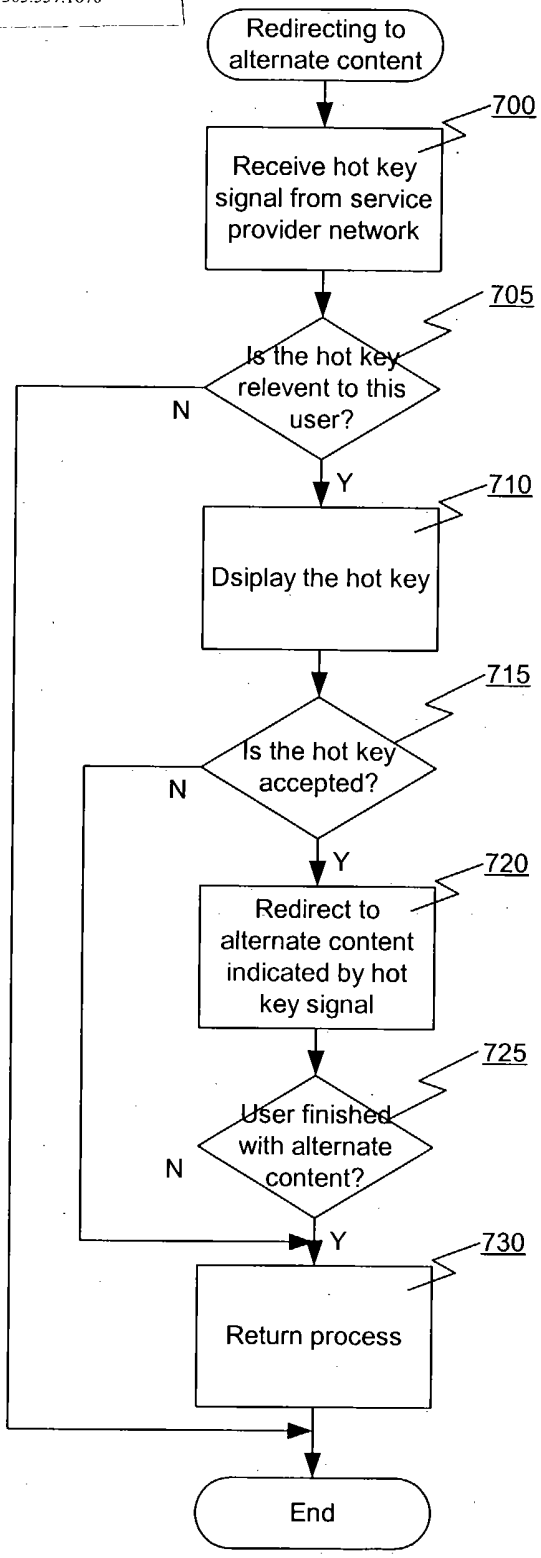
Redirecting to alternate content
700
Receive hot key signal from service provider network
705
Is the hot key relevent to this user?
N
Y
710
Dsiplay the hot key
715
Is the hot key accepted?
N
Y
720
Redirect to alternate content indicated by hot key signal
725
User finished with alternate content?
N
Y
730
Return process
End

Figure 7